**Multiple Choice** Choose the best answer for each equation.

**\_\_\_\_\_\_\_1. Solve for l. V = lwh**

A l = V – wh

B l = V – w – h

C l = 

D l = 

**\_\_\_\_\_\_\_2. Solve for x. 5x + 4y = 7x**

A 

B 

C 

D 

**\_\_\_\_\_\_\_3. Solve the proportion. **

A 

B 

C 4

D 105

**\_\_\_\_\_\_\_4. Solve the proportion. **

A -3

B -17

C 

D 11

**\_\_\_\_\_\_\_5. Solve the proportion. **

A 

B 

C 36

D 

**\_\_\_\_\_\_\_ 6. A car travels 200 miles on 12 gallons of gas. Which proportion could be used to find how many gallons the car needs to travel 500 miles?**

A 

B 

C 

D 

**\_\_\_\_\_\_\_7. A recipe calls for 2 cups of chocolate chips to make 36 cookies. How many cups of chocolate chips should you use to make 48 cookies?**

A 

B 

C 

D 

**\_\_\_\_\_\_\_\_8. A recipe for Koolaid calls for 1 part sugar for every 2 parts water. Jim needs to make a large quantity for a party. \Which mixture follows the ratio in the recipe?**

A 1 cup of sugar, 1 cup of water

B 2 cups of sugar, 1 cup of water

C 3 cups of sugar, 9 cups of water

D 6 cups of sugar, 12 cups of water

**\_\_\_\_\_\_\_\_9. Find 60% of 42.**

A .252

B 70

C 25.2

D 1428

**\_\_\_\_\_\_\_10. 32 is 64% of what number?**

A 50

B 200

C 20.48

D 5000

\_\_\_\_\_\_\_11.  **What percent of 30 is 60?**

A 50%

B 200%

C 

D 2%

\_\_\_\_\_\_\_12. **ROTC is selling coupon books as a fundraiser. They get to keep 25% of all sales. How many dollars worth of books must they sell to earn a profit of $800?**

A $200

B $320

C $3200

D $2000

\_\_\_\_\_\_\_13**. On a test with 60 questions, Tim answered 12 questions incorrectly. What percent of the questions did he answer correctly?**

A 80%

B 20%

C 48%

D 52%

\_\_\_\_\_\_\_14**. The original price of a pair of shoes was $80. Samantha bought them on sale at a discount of 30% off. Including sales tax of 8.25%, how much did she pay?**

A $56.00

B $95.42

C $51.38

D $60.62

\_\_\_\_\_\_\_15**. The attendance at the last football game was 1500 people. This week 1800 people attended. Find the percent of increase in attendance.**

A 2%

B 20%

C 83%

D 17%

\_\_\_\_\_\_\_16. **Use the formula for simple interest I = prt. Find t if I = $72.10, r = 3.5%, and p = $515.**

A 2 years

B  years

C 3 years

D 4 years

\_\_\_\_\_\_\_17. **y varies directly as x. If y = 16 when x = 4, find x when y = 36.**

A 9

B 

C 144

D 4

\_\_\_\_\_\_\_18. **The amount of weight gained is directly proportional to the number of extra calories eaten. If 2 pounds are gained for every 4200 extra calories, how many pounds will Scott gain if he consumes 10,500 additional calories?**

A 8 pounds

B .8 pounds

C 5 pounds

D .5 pounds

\_\_\_\_\_\_\_19. **y varies inversely as x. If y = 40 when x = 16, find y when x = 10.**

A 25

B 4

C 2.5

D 64

\_\_\_\_\_\_\_\_20. **The weight needed to balance a seesaw varies inversely as its distance from the fulcrum. Jim and Jackie are seated at opposite ends of a seesaw. Jim weighs 200 pounds and Jackie weighs 125 pounds. If Jim is seated 5 feet from the fulcrum, how far should Jackie sit from the fulcrum to balance the seesaw?**

A 3.125 feet

B 8 feet

C 13.3 feet

D 4 feet

**\_\_\_\_\_\_\_21. Two trains going in opposite directions leave Chicago at the same time. One train travels 130km/h and the other travels 110km/h. After how many hours will the planes be 480 km apart?**

A 2 hours

B 24 hours

C 2.5 hours

D 3 hours

**\_\_\_\_\_\_\_22. The Johnsons left on a road trip, traveling at a rate of 50 miles per hour. One-half hour later, their neighbors left for the same road trip. They drove at a rate of 70 miles per hour. What time would they catch up to the Johnsons?**

A 10 hours

B 7 hours

C 2 hours

D 1.75 hours